

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-12. (Cancelled)

13. (Currently Amended) An electronic apparatus forming one of a sensor, an actuator and a control that communicates with at least one additional electronic apparatus via a data bus using a pre-determined communications protocol, the electronic apparatus comprising:

a bus interface;

a control engine that comprises:

an application-specific engine that controls the electronic apparatus independently of the communications protocol; and

a bus protocol-specific engine that transmits and receives data via a bus interface;

wherein said application-specific engine and said bus protocol-specific engine are decoupled from one another and said bus protocol-specific engine and that exchanges application-specific data with said application-specific engine via a standardized interface; and

wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the

bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

14. (Previously Presented) The electronic apparatus of claim 13, wherein the control engine includes a plurality of bus protocol-specific engines and a plurality of bus protocols, each of the bus protocol-specific engines being associated with a bus protocol and wherein each bus protocol-specific engine converts application-specific data into the associated bus protocol and converts data received via the bus interface in the associated bus protocol into application-specific data.

15. (Previously Presented) The electronic apparatus of claim 14, wherein a different bus interface is associated with each bus protocol-specific engine.

16. (Currently Amended) The electronic apparatus of claim 14, wherein at least some of the bus protocol-specific engines are associated with a single bus interface and a selection support unit determines which implements a select bus protocol-specific engine ~~is implemented~~.

17. (Previously Presented) The electronic apparatus of claim 16, wherein the bus protocol-specific engine is manually selected using the selection unit.

18. (Previously Presented) The electronic apparatus of claim 16, wherein the bus protocol-specific engine is automatically selected using the selection unit based on

a currently implemented bus protocol.

19. (Previously Presented) The electronic apparatus of claim 13, wherein a set of elements is communicated to the control engine, each of which defines a type of permitted application-specific data.

20. (Previously Presented) The electronic apparatus of claim 19, wherein said set of elements includes at least one of variables, methods, messages and events.

21. (Currently Amended) A configuration apparatus for configuring an electronic apparatus that is one of a sensor, an actuator and a control, comprising:

 a bus interface;

 a configuration engine that comprises:

 an application-specific engine that controls the configuration apparatus independently of [[the]] a communications protocol; and

 a bus protocol-specific engine that transmits and receives data via a bus interface; and that

wherein said application-specific engine and said bus protocol-specific engine are decoupled from one another and said bus protocol-specific engine exchanges application-specific data with said application-specific engine via a standardized interface that is common to a standardized interface of the configuration apparatus; and

wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the

bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

22. (Currently Amended) The configuration apparatus of claim 21, that reads out and sets application-specific pre-determined settings of the ~~to-be-configured~~ electronic apparatus that is to be configured.

23. (Previously Presented) The configuration apparatus of claim 21, wherein the configuration apparatus is provided as a computer and the configuration engine and the bus protocol-specific engine are provided as computer programs.

24. (Currently Amended) The configuration apparatus of claim 23, wherein the computer includes at least one of a personal computer (PC) and a handheld device (PDA).

25. (Currently Amended) A bus system, comprising:
a data bus; and
a plurality of apparatuses each of which is one of a sensor, an actuator and a control and each of which comprises:
a bus interface;
a control engine that includes an application-specific engine that controls the apparatus independently of [[the]] a communications protocol; and
a bus protocol-specific engine that transmits and receives data via a bus

interface; and that

wherein said application-specific engine and said bus protocol-specific engine are decoupled from one another and said bus protocol-specific engine exchanges application-specific data with said application-specific engine via a standardized interface, wherein data received via the standardized interface is converted into the communications protocol by the bus-protocol-specific engine and data received via the bus interface is converted into corresponding application-specific data by the bus-protocol-specific engine.

26. (Previously Presented) The bus system of claim 25, wherein each of the bus protocol-specific engines are associated with a single bus interface and a selection unit determines which bus protocol-specific engine is implemented.

27. (New) The bus system of claim 24, wherein the hand-held device is a PDA.